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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/813,296	KINSTLER, GARY A.	
	Examiner	Art Unit	
	Kan Yuen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/30/2004, 5/1/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-7, 11, 13, 16, 17, 19, 21, 25, 26, 29, 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Kramer et al. (Pat No.: 6466539).

In claim 1, Kramer et al. disclosed the method of transmitting periodically a first message from one of the plurality of nodes to another of the nodes on a first of the plurality of busses of the network (see column 5, lines 15-40, and see column 6, lines 34-40, and see fig. 1). As shown in fig. 1, there is plurality of modules (14, 16, 18, 20) coupling with each other with 2 buses (10, 12). Status message or the first message is being transferred from one module 14 to module 16 periodically. Each module has two identical units such as A0, B0, A1, B1, A2, and B2. Each bus 10 and 12 are connected to both identical unit of each module for redundancy reason; determining whether the first message was received by the other of the nodes on the first bus; and when it is determined that the first message was not received by the other of the nodes, transmitting a recovery command to the other of the nodes on a second of the plurality of busses (see column 3, lines 15-35, see column 6, lines 35-67, and see column 7, lines 1-15, and see fig. 1). After fault detection, the transmitting module will generate a

relevant message or the recovery message to the module again using any of the 2 buses (10, 12) or the second bus. Since all bus subscribers transmit message independently, the bus are different.

Regarding claim 5, Kramer et al. disclosed the method of transmitting periodically the first message further comprises transmitting the first message on each of the plurality of busses (see column 5, lines 15-40, and see column 6, lines 34-40, and see fig. 1). As shown in fig. 1, there is plurality of modules (14, 16, 18, 20) coupling with each other with 2 buses (10, 12). Status or the first message is being transferred from one module 14 to module 16 periodically.

Regarding claim 6, Kramer et al. disclosed the method of transmitting periodically the first message further comprises transmitting the first message from the one node to each of the other nodes (see column 5, lines 15-40, and see column 6, lines 34-40, and see fig. 1). As shown in fig. 1, there is plurality of modules (14, 16, 18, 20) coupling with each other with 2 buses (10, 12). Status or the first message is being transferred from one module 14 to all modules 16,18, and 20 periodically.

Regarding claim 7, Kramer et al. disclosed the method of the nodes transmit a plurality of messages in each of a plurality of frames on the first bus, the first message is one of the plurality of messages, and the first message is transmitted once in each frame (see column 7, lines 49-55). As shown, all modules are independently and periodically transmitting data to other modules. Therefore we can interpret that each module transmits once in each frame. The frame can be any data packet or message such as status message.

Regarding claim 11, Kramer et al. disclosed the method of the second bus is a different type of bus than the first bus (see column 3, lines 15-35) Since all bus subscribers transmit message independently, the bus are different.

Regarding claim 13, Kramer et al. disclosed the method of a network having a plurality of busses; a plurality of nodes operatively connected to the plurality of busses of the network; means for transmitting periodically a first message from one of the plurality of nodes to another of the nodes on a first of the plurality of busses of the network (see column 5, lines 15-40, and see column 6, lines 34-40, and see fig. 1). As shown in fig. 1, there is plurality of modules (14, 16, 18, 20) coupling with each other with 2 buses (10, 12). Status message or the first message is being transferred from one module 14 to module 16 periodically. Each module has two identical units such as A0, B0, A1, B1, A2, and B2. Each bus 10 and 12 are connected to both identical unit of each module for redundancy reason; means for determining whether the first message was received by the other of the nodes on the first bus; and means for transmitting a recovery command associated with the first bus to the other of the nodes on a second of the plurality of busses in response to determining that the first message was not received by the other of the nodes (see column 6, lines 35-67, and see column 7, lines 1-15, and lines 49-65 and see fig. 1). After fault detection, the transmitting module will generate a relevant message or the recovery message to the module again using the 2 buses (10, 12) or the second bus. Since all bus subscribers transmit message independently, the bus are different.

Regarding claim 16, Kramer et al. disclosed the method of the nodes are operatively configured to transmit a plurality of messages in each of a plurality of frames on the first bus, the first message is one of the plurality of messages, and the first message is transmitted once in each frame (see column 7, lines 49-55). As shown, all modules are independently and periodically transmitting data to other modules. Therefore we can interpret that each module transmits once in each frame. The frame can be any data packet or message such as status message.

Regarding claim 17, Kramer et al. disclosed the method of the nodes are operatively configured to transmit a plurality of messages in each of a plurality of frames on the first bus, the first message is one of the plurality of messages, each frame includes a plurality of minor frames, and the first message is transmitted once in each minor frame (see column 7, lines 49-55). As shown, all modules are independently and periodically transmitting data to other modules. Therefore we can interpret that each module transmits once in each frame. The frame can be any data packet or message such as status message.

Regarding claim 19, Kramer et al. disclosed the method of the second bus is a different type of bus than the first bus (see column 3, lines 15-35) Since all bus subscribers transmit message independently, the bus are different.

Regarding claim 21, Kramer et al. disclosed the method of transmitting periodically a first message from one of the plurality of nodes to another of the nodes on a first of the plurality of busses of the network (see column 5, lines 15-40, and see column 6, lines 34-40, and see fig. 1). As shown in fig. 1, there is plurality of modules

(14, 16, 18, 20) coupling with each other with 2 buses (10, 12). Status or the first message is being transferred from one module 14 to module 16 periodically. Each module has two identical units such as A0, B0, A1, B1, A2, and B2. Each bus 10 and 12 are connected to both identical unit of each module for redundancy reason; determining whether the first message was received by the other of the nodes on the first bus; and when it is determined that the first message was not received by the other of the nodes, transmitting a recovery command associated with the first bus to the other of the nodes on a second of the plurality of busses (see column 6, lines 35-67, and see column 7, lines 1-15, lines 49-65 and see fig. 1). After fault detection, the transmitting module will generate a relevant message or the recovery message to the module again using the 2 buses (10, 12) or the second bus. Since all bus subscribers transmit message independently, the bus are different.

Regarding claim 25, Kramer et al. disclosed the method of transmitting periodically the first message further comprises transmitting the first message from the one node to each of the other nodes (see column 5, lines 15-40, and see column 6, lines 34-40, and see fig. 1). As shown in fig. 1, there is plurality of modules (14, 16, 18, 20) coupling with each other with 2 buses (10, 12). Status or the first message is being transferred from one module 14 to module 16 periodically.

Regarding claim 26, Kramer et al. disclosed the method of the nodes transmit a plurality of messages in each of a plurality of frames on the first bus, the first message is one of the plurality of messages, and the first message is transmitted once in each frame (see column 7, lines 49-55). As shown, all modules are independently and

periodically transmitting data to other modules. Therefore we can interpret that each module transmits once in each frame. The frame can be any data packet or message such as status message.

Regarding claim 29, Kramer et al. disclosed the method of the second bus is a different type of bus than the first bus (see column 3, lines 15-35) Since all bus subscribers transmit message independently, the bus are different.

Regarding claim 31, Kramer et al. disclosed the method of a plurality of network interface cards operatively configured to connect to a network having a plurality of busses, each network interface card having a bus interface circuit operatively configured to connect to a respective one of the plurality of busses (see column 5, lines 15-40, and see column 6, lines 34-40, and see fig. 1). As shown in fig. 1, there is plurality of modules (14, 16, 18, 20), which has network interfaces for coupling with each other with the 2 buses (10, 12), as shown in fig.1. Status or the first message is being transferred from one module 14 to module 16 periodically. Each module has two identical units such as A0, B0, A1, B1, A2, and B2. Each bus 10 and 12 are connected to both identical unit of each module for redundancy reason; a memory having a program that periodically transmits a first message to at least one of a plurality of nodes operatively connected to a first of the plurality of busses of the network, determines whether the first message was received by the other of the nodes on the first bus, and transmits a recovery command associated with the first bus to the other of the nodes on a second of the plurality of busses in response to determining that the first message was not received by the other of the nodes (see column 6, lines 35-67, and see column

7, lines 1-15, and see fig. 1). After fault detection, the transmitting module will generate a relevant message to the module again using the 2 buses (10, 12); and a processing unit for running the program (see column 1, lines 19-45). As shown, the system comprises microprocessor, and memory for processing embedded program.

Claim Rejections - 35 USC § 103

3. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 3, 4, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (Pat No.: 6466539), in view of Qian et al. (Pub No.: 2005/0030926).

For claim 2, Kramer et al. disclosed all the subject matter of the claimed invention with the exception of the other of the nodes cycles power to a bus interface circuit operatively connecting the other node to the first bus in response to the recovery

command. Qian et al. from the same or similar fields of endeavor teaches the method of the other of the nodes cycles power to a bus interface circuit operatively connecting the other node to the first bus in response to the recovery command (see paragraph 0008, lines 1-25). As shown, the power levels of the R-SPICH channel or the first bus link is made available based on the data rate received on the reverse channel or second bus link. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Qian et al. in the network of Kramer et al. The motivation for using the method as taught by Qian et al. in the network of Kramer et al. being that the received data rate can re-establish the link to make it available for utilization.

Regarding claims 3, 23, Kramer et al. disclosed the method of the bus interface circuit is a link layer controller (see column 4, lines 38-50). The interface modules 18 and 20 can be the link layer controller.

Regarding claims 4, 24, Kramer et al. disclosed the method of the bus interface circuit is a physical layer controller (see column 4, lines 38-50). The interface modules 18 and 20 can be the physical layer controller.

Regarding claim 14, Qian et al. disclosed the method of the other of the nodes comprises; a bus interface circuit operatively connecting the other node to the first bus; and means for interrupting power to the bus interface circuit in response to the recovery command (see paragraph 0008, lines 1-25). As shown, the power levels of the R-SPICH channel or the first bus link is made available based on the data rate received on

the reverse channel or second bus link. Therefore the power is interrupted or adjusted based on the rate.

Regarding claim 22, Qian et al. disclosed the method of the other of the nodes cycles power to a bus interface circuit operatively connecting the other node to the first bus in response to the recovery command (see paragraph 0008, lines 1-25). As shown, the power levels of the R-SPICH channel or the first bus link is made available based on the data rate received on the reverse channel or second bus link. Therefore the power is interrupted or adjusted based on the rate.

6. Claims 8 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (Pat No.: 6466539), in view of Engels et al. (Pub No.: 2004/0213174).

For claims 8 and 27, Kramer et al. disclosed all the subject matter of the claimed invention with the exception of the nodes transmit a plurality of messages in each of a plurality of frames on the first bus, the first message is at least one of the plurality of messages, each frame includes a plurality of minor frames, and the first message is transmitted once each minor frame. Engels et al. from the same or similar fields of endeavor teaches the method of the nodes transmit a plurality of messages in each of a plurality of frames on the first bus, the first message is at least one of the plurality of messages, each frame includes a plurality of minor frames, and the first message is transmitted once each minor frame (see paragraph 0028, lines 1-4). The uplink frame, which includes plurality of mini time slot frames, is allocated for data transmission in

each individual slot frame. The data can be any kind of messages. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Engels et al. in the network of Kramer et al. The motivation for using the method as taught by Engels et al. in the network of Kramer et al. being that the minor frames can be transmitted without major delay.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (Pat No.: 6466539), in view of Ishida (Pat No.: 5170473).

For claim 9, Kramer et al. disclosed all the subject matter of the claimed invention with the exception of determining whether the first message was received comprises sending a second message to the other of the nodes on the first bus and determining whether the second message was received by the other of the nodes. Ishida from the same or similar fields of endeavor teaches the method of determining whether the first message was received comprises sending a second message to the other of the nodes on the first bus and determining whether the second message was received by the other of the nodes (see column 4, lines 65-68, and see column 5, lines 1-5). As shown, the signal is transmitted via the same path, which determines which CPU will receive the data. Therefore, we can interpret that the signal is sent on the same path as the previous path. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Ishida in the network of Kramer et al. The motivation for using the method as taught by Ishida in the network of

Kramer et al. being that the signal provides redundancy for determining if the path is working.

8. Claims 10, 18, 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (Pat No.: 6466539), in view of Kim (Pat No.: 6064554).

For claim 10, Kramer et al. disclosed all the subject matter of the claimed invention with the exception of detecting a current surge in a bus interface circuit operatively connecting the one node to the first bus; and cycling power to the bus interface circuit in response to detecting the current surge in the bus interface circuit. Kim from the same or similar fields of endeavor teaches the method of detecting a current surge in a bus interface circuit operatively connecting the one node to the first bus; and cycling power to the bus interface circuit in response to detecting the current surge in the bus interface circuit (see column 2, lines 13-40). The power unit is couple to the overcurrent or current surge detector. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Kim in the network of Kramer et al. The motivation for using the method as taught by Kim in the network of Kramer et al. being that the over-current detection can provide protections to system cause by power outrage.

Regarding claim 18, Kim disclosed the method of the one node comprises: a bus interface circuit operatively connecting the one node to the first bus; means for detecting a current surge in the bus interface circuit; and means for cycling power to the bus

interface circuit in response to detecting the current surge (see column 2, lines 13-40). The power unit is couple to the current detector.

Regarding claim 28, Kim disclosed the method of detecting a current surge in a bus interface circuit operatively connecting the one node to the first bus; and reinitializing a bus interface circuit in response to detecting the current surge (see column 2, lines 13-40). The power unit is couple to the current detector.

9. Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (Pat No.: 6466539), in view of Lewis (Pat No.: 7193985).

For claim 12, Kramer et al. disclosed all the subject matter of the claimed invention with the exception of the recovery command causes a bus interface circuit operatively connecting the other node to the first bus to be re-initialized. Lewis from the same or similar fields of endeavor teaches the method of the recovery command causes a bus interface circuit operatively connecting the other node to the first bus to be re-initialized (see column 10, lines 40-60). As shown, the control node receives a control message for initialization. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Lewis in the network of Kramer et al. The motivation for using the method as taught by Lewis in the network of Kramer et al. being that the control message refreshes the node memory and to overcome fault in the node.

Regarding claim 20, Lewis disclosed the method of the other of the nodes comprises: a bus interface circuit operatively connecting the other node to the first bus; and means for receiving the recovery command on the second bus and for re-initializing the bus interface circuit in response to the recovery command (see column 10, lines 40-60). As shown, the control node receives a control message for initialization.

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (Pat No.: 6466539), in view of Qian et al. (Pub No.: 2005/0030926), as applied to claim 14 above, and further in view of Kim (Pat No.: 6064554).

For claim 15, Kramer et al. and Qian et al. disclosed all the subject matter of the claimed invention with the exception of detecting a current surge in the bus interface circuit operatively connecting the other node to the first bus; and means for reporting the current surge in the bus interface circuit to the one node on the second bus. Kim from the same or similar fields of endeavor teaches the method of detecting a current surge in the bus interface circuit operatively connecting the other node to the first bus; and means for reporting the current surge in the bus interface circuit to the one node on the second bus (see column 3, lines 52-67, and see column 4, lines 1-3). As shown, the detected current is transmitting to the USB controller 100. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Kim in the network of Kramer et al. and Qian et al. The motivation for using the method as taught by Kim in the network of Kramer et al. and Qian et al.

being that the over-current detection can provide protections to system cause by power outrage.

11. Claims 30, 32, 33, 34, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (Pat No.: 6466539), in view of Kim (Pat No.: 6064554), as applied to claim 28 above, and further in view of Lewis et al. (Pat No.: 7193985).

For claim 30, Kramer et al. and Kim disclosed all the subject matter of the claimed invention with the exception of the recovery command causes a bus interface circuit operatively connecting the other node to the first bus to be re-initialized. Lewis et al. from the same or similar fields of endeavor teaches the method of the recovery command causes a bus interface circuit operatively connecting the other node to the first bus to be re-initialized (see column 10, lines 40-60). As shown, the control node receives a control message for initialization. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Lewis in the network of Kramer et al. and Kim The motivation for using the method as taught by Lewis in the network of Kramer et al. and Kim being that the control message refreshes the node memory and to overcome fault in the node.

Regarding claim 32, Lewis et al. disclosed the method of the recovery command causes the other of the nodes to reinitialize a bus interface circuit operatively connecting the other of the nodes to the first bus (see column 10, lines 40-60). As shown, the control node receives a control message for initialization.

Regarding claim 33, Kramer et al. disclosed the method of the second bus is of a different type than the first bus (see column 3, lines 15-35). Since all bus subscribers transmit message independently, the bus are different.

Regarding claim 34, Kramer et al. disclosed the method of the first message is transmitted once per frame (see column 7, lines 49-55). As shown, all modules are independently and periodically transmitting data to other modules. Therefore we can interpret that each module transmits once in each frame. The frame can be any data packet or message such as status message.

Regarding claim 36, Kim et al. disclosed the method of detecting a current surge in the bus interface circuit of one of the network interface cards; and cycling power to the bus interface circuit of the one network interface card in response to detecting the current surge (see column 2, lines 13-40). The power unit is couple to the current detector.

12. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kramer et al. (Pat No.: 6466539), in view of Kim (Pat No.: 6064554), as applied to claim 28 above, and further in view of Lewis et al. (Pat No.: 7193985), and Engels et al. (Pub No.: 2004/0213174).

For claim 35, Kramer et al. Kim and Lewis et al. disclosed all the subject matter of the claimed invention with the exception of the nodes are operatively configured to transmit a plurality of messages in each of a plurality of frames on the first bus, the first

message is one of the plurality of messages, each frame includes a plurality of minor frames, and the first message is transmitted once in each minor frame. Engels et al. from the same or similar fields of endeavor teaches the method of the nodes are operatively configured to transmit a plurality of messages in each of a plurality of frames on the first bus, the first message is one of the plurality of messages, each frame includes a plurality of minor frames, and the first message is transmitted once in each minor frame (see paragraph 0028, lines 1-4). The uplink frame, which includes plurality of mini time slot frames, is allocated for data transmission in each individual slot frame. The data can be any kind of messages. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Engels et al. in the network of Kramer et al. Kim and Lewis et al. The motivation for using the method as taught by Engels et al. in the network of Kramer et al. Kim and Lewis et al. being that the minor frames can be transmitted without major delay.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Eicher (Pat No.: 6807148), Ghahremani et al. (Pat No.: 6717913), Briddell et al. (Pat No.: 6973093), and Choi (Pub No.: 2005/0025088), are show systems which considered pertinent to the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kan Yuen whose telephone number is 571-270-2413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ky

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER